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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,390	06/28/2007	Daniel J. Graney	4981A	6718
7590	11/16/2009		EXAMINER	
Chief Patent Counsel Engelhard Corporation 101 Wood Avenue P O Box 770 Iselin, NJ 08830-0770			HIGGINS, GERARD T	
			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			11/16/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/567,390	GRANEY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	GERARD T. HIGGINS	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 07 August 2009.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-12 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 07 August 2009 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____ .

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment filed 08/07/2009 has been entered. Currently claims 1-12 are pending and claims 11 and 12 are new.

### ***Oath/Declaration***

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

Applicants identify PCT/US2004/025436 as an application to which they are claiming foreign priority under 35 U.S.C. 119; however, this appears to be incorrect as that international application is the parent application to which this US application claims benefit as a national stage entry under 35 U.S.C. 371, and is therefore not "prior" as suggested by applicants. The Examiner notes that the pending Application still gains the benefit of the August 06, 2004 Application date, since the pending Application has been clearly noted as a 371 of PCT/US2004/025436. Therefore, notation of PCT/US2004/025436 as a "foreign priority document" appears to be both redundant and improper.

This objection can be overcome by filing a "Supplemental Application Data Sheet" containing the correct information, see MPEP 601.05.

***Drawings***

3. The drawings were received on 08/07/2009. These drawings are acceptable.

***Specification***

4. The disclosure is objected to because of the following informalities:

a. For Formulas (I) through (IX) please place the appropriate Roman numeral next to the structure in parenthesis.

Appropriate correction is required.

***Claim Objections***

5. Claims 1-5 are objected to because of the following informalities:

a. In claim 1, the phrase “at least one said layers” on the fourth line of the claim is objected to grammatically. The objection will be withdrawn if the phrase is changed to “at least one of said layers.”

b. In claim 2, the phrase “at least one said layers” on the third line of the claim is objected to grammatically. The objection will be withdrawn if the phrase is changed to “at least one of said layers.”

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With regard to claim 1, the Examiner does not find support to state that "said iridescent film is **resistant** to butyl acetate" in the specification as originally filed. The Examiner does find support to state that "said colored iridescent film upon exposure to butyl acetate remains colored and iridescent" (see page 6, lines 1-2 of applicants' specification). This rejection will be withdrawn if claim 1 is amended to recite "wherein said colored iridescent film upon exposure to butyl acetate remains colored and iridescent."

With regard to claim 2, the Examiner does not find support to state that "at least one said layers contains about 0.1% to about 5% by weight of said organic pigment" in the specification as originally filed. The section at page 22, lines 19-20 of applicants' specification states that the pigments are used in the "iridescent films at between about 0.1% to about 5% by weight." This means that the end points of the range are not included, and therefore applicants' claim 2 lack proper written description for that reason; further, this sets forth that the "iridescent films" includes the pigment and not "at least one said layers" as is claimed.

With regard to claim 12, the Examiner does not find support to state that "said yarn is resistant to dry cleaning solvent and sunlight" in the specification as originally filed. The Examiner does find support to state "wherein said organic pigment will not leach out of the film in dry cleaning fluid and will not fade when exposed to simulated sunlight" (see page 24, line 27 to page 25, line 7 of applicants' specification). This rejection will be withdrawn if claim 12 is amended to recite "wherein said organic pigment will not leach out of the film in dry cleaning fluid and will not fade when exposed to simulated sunlight."

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 1, the term "substantially parallel" in claim 1 is a relative term which renders the claim indefinite. The term "substantially parallel" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The Examiner looked to applicants' specification to find the definition of this term; however, the specification definition (see page 22, lines 23-25) also has relative terms, i.e. "adjacent layers remain **generally** in the x-y plane and have **minimal** or no z direction shift," which do not provide a clear definition to the claim. The

Examiner will interpret any prior art laminate-type structure as having "substantially parallel layers" as claimed. This rejection will be removed if the term "substantially" is deleted.

With further regard to claim 1, the term "resistant to butyl acetate" is a relative term which renders the claim indefinite. The term "resistant to butyl acetate" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear how "resistant" the film must be to butyl acetate in order to meet the limitations of the claim. This rejection will be withdrawn if the limitation is if claim 1 is amended to recite "wherein said colored iridescent film upon exposure to butyl acetate remains colored and iridescent," which is how the Examiner will interpret the claim.

With regard to claim 12, the term "resistant to dry cleaning solvent and sunlight" is a relative term which renders the claim indefinite. The term "resistant to dry cleaning solvent and sunlight" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear how "resistant" the film must be to dry cleaning solvent and sunlight in order to meet the limitations of the claim. For purposes of examination, the Examiner deems that any colored iridescent film that meets the limitations of claims 1 and 11 will also meet the limitations of claim 12. This rejection will be withdrawn if claim 12 is amended to recite "wherein

said organic pigment will not leach out of the film in dry cleaning fluid and will not fade when exposed to simulated sunlight."

***Claim Rejections - 35 USC § 103***

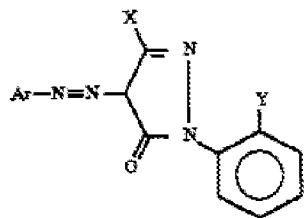
8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3, 6, 7, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onderkirk et al. (WO 99/36478) in view of Hays (5,669,967) as evidenced by Shetty et al. (5,837,359).

With regard to claims 1 and 3, Onderkirk et al. discloses color shifting film glitter, which reads on applicants' colored iridescent film (Abstract). The color shifting film is comprised of alternating layers of a first and second polymeric material (page 2, line 28 to page 3, line 5). Onderkirk et al. suggest on page 20, lines 25-30 that the color shifting film glitter may have tinted coatings; however, they do not disclose that at least one of the alternating polymeric layers contains an organic pigment, including one or more azo compounds.

Hays discloses an azo compound of the following formula (Abstract).



The formula reads on applicants' formula (I) of claim 3. The substituents overlap between the claim and the prior art, including the aromatic moiety "Ar." The azo dye form can be converted to a pigment form by lakeing with a divalent metal salt (col. 5, lines 38-50). The pigment compositions can be incorporated into thermoplastic and thermosetting materials (col. 6 lines 10-23).

Since Onderkirk et al. and Hays are both drawn to plastic compositions; it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine in the azo pigment of Hays into the polymeric layers of the color shifting film of Onderkirk et al. The results of such a combination would have been predictable to one having ordinary skill; further, each of the elements would have performed the same in combination as they had separately. The motivation to use these azo pigments can be found at col. 6, lines 3-5, where Hays states that the pigments provide improved color strength, heat stability, and are useful as colorants in plastics. Additionally, as evidenced by Shetty et al., one of ordinary skill would understand that pigments can be incorporated into these multi-layered alternating polymeric iridescent films to provide both color and luster (col. 2, lines 30-37).

With regard to the limitation that the "iridescent film is resistant to butyl acetate," the Examiner deems that the resultant film combination will intrinsically be resistant to

butyl acetate because the azo pigment is the same and the combination of polymers are the same, i.e. PET/PMMA (page 19, lines 6-17).

With regard to claim 2, the Examiner deems the amount of organic pigment to be mere optimization. It has long been an axiom of United States patent law that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. *In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003) ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Boesch*, 617 F.2d 272, 276 (CCPA 1980) ("[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art."); *In re Aller*, 220 F.2d 454, 456 (CCPA 1955) ("[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."). "Only if the 'results of optimizing a variable' are 'unexpectedly good' can a patent be obtained for the claimed critical range." *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (quoting *In reAntonie*, 559 F.2d 618, 620 (CCPA 1977)). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have included the organic pigment in any amount, including the 0.1% to 5% by weight as claimed, in order to provide a film that had the right amount of coloration depending upon the end use of the device. One of ordinary skill would recognize that using a greater amount of organic pigment would result in a stronger color; further, one of

ordinary skill would know how to balance such concerns as cost and coloration to arrive at an article appropriate for its intended use.

With regard to claims 6 and 7, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the azo pigment of Hays into any of the alternating polymeric layers, including at least one inner layer or at least one outer layer as claimed, in order to adjust the luster and coloration of the color shifting film to create the most attractive and intriguing appearance for the resulting glitter. One of ordinary skill in the art would recognize the effect of incorporating the pigments into the various layers.

With regard to claim 9, Onderkirk et al. disclose that the color shifting films may be made into glitter (page 20, lines 1-16).

With regard to claim 10, Onderkirk et al. disclose that the glitter may be incorporated into a fingernail polish, which reads on applicants' nail lacquer (page 27, lines 3-7).

With regard to claim 11, Onderkirk et al. disclose at page 26, lines 15-17 that the glitter-containing matrix may be formed into fiber; further, they teach at page 59, lines 8-10 that the glitter can be incorporated into carpet fibers or a ribbon. All of these materials read on applicants' "[y]arn made of said colored iridescent film of claim 1."

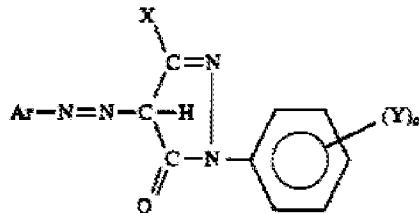
With regard to claim 12, the Examiner has rendered obvious the colored iridescent films of claim 1. Given the fact that these films and yarn/fiber comprise the same materials claimed and disclosed in applicants' specification, the Examiner deems

that yarn made of said colored iridescent films will intrinsically be resistant to dry cleaning solvent and sunlight as claimed.

10. Claims 1, 2, 4, 6, 7, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onderkirk et al. (WO 99/36478) in view of Hays (5,746,821) as evidenced by Shetty et al. (5,837,359).

With regard to claims 1 and 4, Onderkirk et al. discloses color shifting film glitter, which reads on applicants' colored iridescent film (Abstract). The color shifting film is comprised of alternating layers of a first and second polymeric material (page 2, line 28 to page 3, line 5). Onderkirk et al. suggest on page 20, lines 25-30 that the color shifting film glitter may have tinted coatings; however, they do not disclose that at least one of the alternating polymeric layers contains an organic pigment.

Hays discloses an azo compound of the following formula (Abstract).



The formula reads on applicants' formula (II) of claim 4. The substituents overlap between the claim and the prior art, including the aromatic moiety "Ar." The azo dye form can be converted to a pigment form by laking with a divalent metal salt (col. 5, lines 22-34). The pigment compositions can be incorporated into thermoplastic and thermosetting materials (col. 5 line 62 to col. 6, line 8).

Since Onderkirk et al. and Hays are both drawn to plastic compositions; it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine in the azo pigment of Hays into the polymeric layers of the color shifting film of Onderkirk et al. The results of such a combination would have been predictable to one having ordinary skill; further, each of the elements would have performed the same in combination as they had separately. The motivation to sue these azo pigments can be found at col. 5, lines 54-57, where Hays states that the pigments provide improved color strength, heat stability, and are useful as colorants in plastics. Additionally, as evidenced by Shetty et al., one of ordinary skill would understand that pigments can be incorporated into these multi-layered alternating polymeric iridescent films to provide both color and luster (col. 2, lines 30-37).

With regard to the limitation that the "iridescent film is resistant to butyl acetate," the Examiner deems that the resultant film combination will intrinsically be resistant to butyl acetate because the azo pigment is the same and the combination of polymers are the same, i.e. PET/PMMA (page 19, lines 6-17).

With regard to claim 2, the Examiner deems the amount of organic pigment to be mere optimization. It has long been an axiom of United States patent law that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. *In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003) ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Boesch*, 617 F.2d 272, 276 (CCPA

1980) ("[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art."); *In re Aller*, 220 F.2d 454, 456 (CCPA 1955) ("[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."). "Only if the 'results of optimizing a variable' are 'unexpectedly good' can a patent be obtained for the claimed critical range." *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (quoting *In reAntonie*, 559 F.2d 618, 620 (CCPA 1977)). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have included the organic pigment in any amount, including the 0.1% to 5% by weight as claimed, in order to provide a film that had the right amount of coloration depending upon the end use of the device. One of ordinary skill would recognize that using a greater amount of organic pigment would result in a stronger color; further, one of ordinary skill would know how to balance such concerns as cost and coloration to arrive at an article appropriate for its intended use.

With regard to claims 6 and 7, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the azo pigment of Hays into any of the alternating polymeric layers, including at least one inner layer or at least one outer layer as claimed, in order to adjust the luster and coloration of the color shifting film to create the most attractive and intriguing appearance for the resulting glitter. One of ordinary skill in the art would recognize the effect of incorporating the pigments into the various layers.

With regard to claim 9, Onderkirk et al. disclose that the color shifting films may be made into glitter (page 20, lines 1-16).

With regard to claim 10, Onderkirk et al. disclose that the glitter may be incorporated into a fingernail polish, which reads on applicants' nail lacquer (page 27, lines 3-7).

With regard to claim 11, Onderkirk et al. disclose at page 26, lines 15-17 that the glitter-containing matrix may be formed into fiber; further, they teach at page 59, lines 8-10 that the glitter can be incorporated into carpet fibers or a ribbon. All of these materials read on applicants' “[y]arn made of said colored iridescent film of claim 1.”

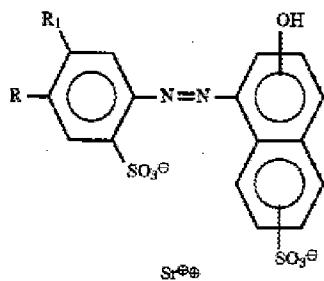
With regard to claim 12, the Examiner has rendered obvious the colored iridescent films of claim 1. Given the fact that these films and yarn/fiber comprise the same materials claimed and disclosed in applicants' specification, the Examiner deems that yarn made of said colored iridescent films will intrinsically be resistant to dry cleaning solvent and sunlight as claimed.

11. Claims 1, 2, 5-7, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onderkirk et al. (WO 99/36478) in view of Bindra (5,677,435) as evidenced by Shetty et al. (5,837,359).

With regard to claims 1 and 5, Onderkirk et al. discloses color shifting film glitter, which reads on applicants' colored iridescent film (Abstract). The color shifting film is comprised of alternating layers of a first and second polymeric material (page 2, line 28 to page 3, line 5). Onderkirk et al. suggest on page 20, lines 25-30 that the color

shifting film glitter may have tinted coatings; however, they do not disclose that at least one of the alternating polymeric layers contains an organic pigment.

Bindra discloses an azo compound of the following formula (Abstract).



The formula reads on applicants' formula (III) of claim 5. The substituents overlap between the claim and the prior art. The azo dye form can be converted to a pigment form by laking with a divalent metal salt (col. 4, lines 10-19). The pigment compositions can be incorporated into thermoplastic and thermosetting materials (col. 4 lines 46-59).

Since Onderkirk et al. and Bindra are both drawn to plastic compositions; it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine in the azo pigment of Bindra into the polymeric layers of the color shifting film of Onderkirk et al. The results of such a combination would have been predictable to one having ordinary skill; further, each of the elements would have performed the same in combination as they had separately. The motivation to sue these azo pigments can be found at col. 4, lines 38-41, where Bindra states that the pigments provide improved color strength, heat stability, and are useful as colorants in plastics. Additionally, as evidenced by Shetty et al., one of ordinary skill would

understand that pigments can be incorporated into these multi-layered alternating polymeric iridescent films to provide both color and luster (col. 2, lines 30-37).

With regard to the limitation that the "iridescent film is resistant to butyl acetate," the Examiner deems that the resultant film combination will intrinsically be resistant to butyl acetate because the azo pigment is the same and the combination of polymers are the same, i.e. PET/PMMA (page 19, lines 6-17).

With regard to claim 2, the Examiner deems the amount of organic pigment to be mere optimization. It has long been an axiom of United States patent law that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. *In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003) ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); *In re Boesch*, 617 F.2d 272, 276 (CCPA 1980) ("[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art."); *In re Aller*, 220 F.2d 454, 456 (CCPA 1955) ("[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."). "Only if the 'results of optimizing a variable' are 'unexpectedly good' can a patent be obtained for the claimed critical range." *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (quoting *In reAntonie*, 559 F.2d 618, 620 (CCPA 1977)). it would have been obvious to one having ordinary skill in the at the time the invention was made to have included the organic pigment in any amount, including the 0.1% to 5% by weight as

claimed, in order to provide a film that had the right amount of coloration depending upon the end use of the device. One of ordinary skill would recognize that using a greater amount of organic pigment would result in a stronger color; further, one of ordinary skill would know how to balance such concerns as cost and coloration to arrive at an article appropriate for its intended use.

With regard to claims 6 and 7, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the azo pigment of Bindra into any of the alternating polymeric layers, including at least one inner layer or at least one outer layer as claimed, in order to adjust the luster and coloration of the color shifting film to create the most attractive and intriguing appearance for the resulting glitter. One of ordinary skill in the art would recognize the effect of incorporating the pigments into the various layers.

With regard to claim 9, Onderkirk et al. disclose that the color shifting films may be made into glitter (page 20, lines 1-16).

With regard to claim 10, Onderkirk et al. disclose that the glitter may be incorporated into a fingernail polish, which reads on applicants' nail lacquer (page 27, lines 3-7).

With regard to claim 11, Onderkirk et al. disclose at page 26, lines 15-17 that the glitter-containing matrix may be formed into fiber; further, they teach at page 59, lines 8-10 that the glitter can be incorporated into carpet fibers or a ribbon. All of these materials read on applicants' "[y]arn made of said colored iridescent film of claim 1."

With regard to claim 12, the Examiner has rendered obvious the colored iridescent films of claim 1. Given the fact that these films and yarn/fiber comprise the same materials claimed and disclosed in applicants' specification, the Examiner deems that yarn made of said colored iridescent films will intrinsically be resistant to dry cleaning solvent and sunlight as claimed.

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Onderkirk et al. (WO 99/36478) in view of Hays (5,669,967) as evidenced by Shetty et al. (5,837,359) as applied to claim 1 above, and further in view of Shetty et al. (5,451,449).

Onderkirk et al. in view of Hays as evidenced by Shetty et al. '359 render obvious all of the limitations of applicants' claim 1 in section 9 above; however, they do not specifically disclose that the thickness of one of the outer layers is greater than the thickness of an inner layer.

Shetty et al. '449 disclose that it is known in multilayered iridescent films comprising alternating polymeric material layers to have the outermost layer to be thicker than an inner layer (col. 3, lines 52-59). The purpose behind this is to have a thick skin layer that presumably will be more durable.

Since Onderkirk et al. in view of Hays and Shetty et al. '449 are drawn to multilayered iridescent films; it would have been obvious to one having ordinary skill in the art at the time the invention was made to make an outer layer of the multilayered laminate to be thicker than an inner layer as claimed. The purpose is to vary the optical properties of the iridescent film as recognized by Onderkirk et al. at page 8, lines 11-18

or to produce a thicker skin layer that would be more durable as recognized by Shetty et al. '449 at col. 3, lines 52-59.

13. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Onderkirk et al. (WO 99/36478) in view of Hays (5,746,821) as evidenced by Shetty et al. (5,837,359) as applied to claim 1 above, and further in view of Shetty et al. (5,451,449).

Onderkirk et al. in view of Hays as evidenced by Shetty et al. '359 render obvious all of the limitations of applicants' claim 1 in section 10 above; however, they do not specifically disclose that the thickness of one of the outer layers is greater than the thickness of an inner layer.

Shetty et al. '449 disclose that it is known in multilayered iridescent films comprising alternating polymeric material layers to have the outermost layer to be thicker than an inner layer (col. 3, lines 52-59). The purpose behind this is to have a thick skin layer that presumably will be more durable.

Since Onderkirk et al. in view of Hays and Shetty et al. '449 are drawn to multilayered iridescent films; it would have been obvious to one having ordinary skill in the art at the time the invention was made to make an outer layer of the multilayered laminate to be thicker than an inner layer as claimed. The purpose is to vary the optical properties of the iridescent film as recognized by Onderkirk et al. at page 8, lines 11-18 or to produce a thicker skin layer that would be more durable as recognized by Shetty et al. '449 at col. 3, lines 52-59.

14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Onderkirk et al. (WO 99/36478) in view of Bindra (5,677,435) as evidenced by Shetty et al. (5,837,359) as applied to claim 1 above, and further in view of Shetty et al. (5,451,449).

Onderkirk et al. in view of Bindra as evidenced by Shetty et al. '359 render obvious all of the limitations of applicants' claim 1 in section 11 above; however, they do not specifically disclose that the thickness of one of the outer layers is greater than the thickness of an inner layer.

Shetty et al. '449 disclose that it is known in multilayered iridescent films comprising alternating polymeric material layers to have the outermost layer to be thicker than an inner layer (col. 3, lines 52-59). The purpose behind this is to have a thick skin layer that presumably will be more durable.

Since Onderkirk et al. in view of Bindra and Shetty et al. '449 are drawn to multilayered iridescent films; it would have been obvious to one having ordinary skill in the art at the time the invention was made to make an outer layer of the multilayered laminate to be thicker than an inner layer as claimed. The purpose to vary the thickness this way is to vary the optical properties of the iridescent film as recognized by Onderkirk et al. at page 8, lines 11-18 or to produce a thicker skin layer that would be more durable as recognized by Shetty et al. '449 at col. 3, lines 52-59.

### ***Response to Arguments***

15. Applicant's arguments, see Remarks, filed 08/07/2009, with respect to the objections to the drawings, the objections to the abstract, the objections to claims 1-5,

and the rejection of claims 2-10 under 35 USC 112 second paragraph have been fully considered and are persuasive. The relevant objections/rejections have been withdrawn.

With regard to the objection to the Oath/declaration, the Examiner notes that this objection can be overcome by filing a "Supplemental Application Data Sheet" containing the correct information, see MPEP 601.05.

It is noted that PCT/US2004/025436, i.e. the international application of the current application, is not "prior" because the filing date accorded this national stage entry is the international filing date of PCT/US2004/025436. It also noted that 35 U.S.C. 365(b) states that "an international application designating the United States shall be entitled to the right of priority based on a prior foreign application, or a prior international application designating at least one country other than the United States;" however, PCT/US2004/025436 *is* the "international application designating the United States," and therefore it cannot have a right to priority based upon itself.

16. Applicant's arguments filed 08/07/2009 have been fully considered but they are not persuasive.

Applicants argue that the term "substantially parallel" is clear and concise.

The Examiner respectfully disagrees, notes his position in section 7 above, and notes that the definition provided in the specification at page 22, lines 23-25 states that "substantially parallel layers means that adjacent layers remain **generally** in the x-y plane and have **minimal** or no z direction shift." This definition does not provide a clear

definition to the claim because the terms “generally” and “minimal” are in and of themselves terms of degree, and therefore the term “substantially parallel” continues to render the claim indefinite.

Applicants argue that their amendment to claim 1 to insert that said colored iridescent film “is resistant to butyl acetate” overcomes the previous rejection of the claims.

The Examiner disagrees, notes that this language is not supported by the specification as originally filed, and notes that this language continues to render the claims indefinite because the term “resistant” is a term of degree. Please see sections 5 and 7 above.

Applicants argue that there is no motivation to combine the pigments of any of Hays '967, Hays '821, or Bindra '435 with the color shifting film of Onderkirk et al.

The Examiner disagrees and notes that Onderkirk et al. suggest using colorants with their color shifting films. Hays '967, Hays '821, and Bindra '435 each broadly suggest using their pigments in a wide variety of plastics including the materials used by Onderkirk et al. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine in the azo pigment of any of Hays '967, Hays '821, or Bindra '435 into the polymeric layers of the color shifting film of Onderkirk et al. The results of such a combination would have been predictable to one having ordinary skill; further, each of the elements would have performed the same in combination as they had separately. Each of the secondary references recognize that their pigments have improved color strength, heat stability, and are useful as colorants in plastics,

which are all motivations to use these pigments in the color shifting films of Onderkirk et al.

Applicants argue that none of Hays '967, Hays '821, or Bindra '435 disclose the usage of their pigment to form iridescent or color-shifting films.

The Examiner notes that applicants appear to be reading the references individually when the present rejections are based upon a combination of references. Onderkirk et al. disclose the usage of color-shifting films with colorants, and the Examiner maintains that it would have been obvious to combine each of Hays '967, Hays '821, or Bindra '435 with Onderkirk et al. for the reasons mentioned above.

Applicants argue that none of Hays '967, Hays '821, or Bindra '435 disclose that a colored iridescent film comprising their pigments would be resistant to butyl acetate as claimed.

The Examiner deems that the resultant film combination will intrinsically be resistant to butyl acetate because the azo pigment is the same and the combination of polymers are the same, i.e. PET/PMMA (page 19, lines 6-17). This is an intrinsic feature of the combination of references.

Applicants argue that Shetty '359 discloses "an entirely different pigment composition applied onto film," and therefore Shetty '359 is non-analogous art.

First, the Examiner notes that Shetty '359 is being relied upon as evidence to establish the level of ordinary skill in the art and is not apart of the combination of references per se. Second, the pigments of Shetty '359 are "incorporated" into one of the thermoplastic resinous layers of their iridescent films, and therefore this art is

analogous art (col. 2, lines 12-14). The Examiner is establishing with this reference that one of ordinary skill in the art knows that ***pigments***, generally, may be incorporated into the layers of iridescent films analogous to applicants' claimed invention.

Applicants argue that the Examiner has not provided reasons or facts to establish that any of the combinations of Hays '967, Hays '821, or Bindra '435 with Onderkirk et al. would have performed the same in combination as they had separately.

The Examiner has set forth his *prima facie* case in this regard based upon the level of ordinary skill in the art. The level of ordinary skill in the art can be resolved from US 5,837,359 wherein pigments, generally, are incorporated into the plastic films of iridescent multilayered films, and it can also be resolved from US 6,207,260 wherein pigments can be incorporated into any layer of an optical body analogous to applicants' colored iridescent film (col. 20, lines 31-41). These multilayered films arrangements are well known in the art; furthermore, the evidence shown above demonstrates that one of ordinary skill in the art would know the effects of adding pigment to one of the layers.

Applicants argue that the Examiner relied upon hindsight to combine the specific elements claimed.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a

reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Onderkirk et al. suggest using colorants with their color shifting films. Hays '967, Hays '821, and Bindra '435 each broadly suggest using their pigments in a wide variety of plastics including the materials used by Onderkirk et al. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine in the azo pigment of any of Hays '967, Hays '821, or Bindra '435 into the polymeric layers of the color shifting film of Onderkirk et al. The results of such a combination would have been predictable to one having ordinary skill; further, each of the elements would have performed the same in combination as they had separately. Each of the secondary references recognize that their pigments have improved color strength, heat stability, and are useful as colorants in plastics, which are all motivations to use these pigments in the color shifting films of Onderkirk et al.

Applicants argue that incorporation of pigment into any of the layers of the multilayered iridescent film is not obvious as set forth by the Examiner; further, they argue that the Examiner relied upon hindsight reasoning to make such an obvious statement.

The Examiner respectfully disagrees and notes that he has set forth that it would have been obvious to have included the pigments of any of Hays '967, Hays '821, or Bindra '435 into the polymeric layers of the color shifting film of Onderkirk et al. The level of ordinary skill has been resolved that pigments may be incorporated throughout any layer of the multilayered film; furthermore, the Examiner has provided a rationale to

include the pigments in any of the layers. It would have been obvious to have included the pigments into any of the alternating polymeric layers, including at least one inner layer or at least one outer layer as claimed, in order to adjust the luster and coloration of the color shifting film to create the most attractive and intriguing appearance for the resulting glitter. One of ordinary skill in the art would recognize the effect of incorporating the pigments into the various layers.

Applicants argue that Onderkirk et al. do not disclose glitter made from iridescent film that is resistant to butyl acetate or glitter containing organic pigment, nor fingernail polish containing glitter made of iridescent film having an organic pigment.

The Examiner notes that applicants appear to be reading the references individually when the rejections are based upon a combination of references. The Examiner maintains that the combination of any of Hays '967, Hays '821, or Bindra '435 with Onderkirk et al. is proper; furthermore, each combination will intrinsically be resistant to butyl acetate, and the combinations render obvious the glitter and fingernail polish as presently claimed.

Applicants argue with regard to claim 8 that Shetty et al. '449 state that their invention does not incorporate pigment and therefore the present combinations of any of Hays '967, Hays '821, or Bindra '435 with Onderkirk et al. is improper.

The Examiner is not relying upon Shetty et al. '449 to teach incorporation of pigments. Shetty et al. '449 is a teaching reference that is used to teach that it is known in multilayered iridescent films comprising alternating polymeric material layers to have the outermost layer to be thicker than an inner layer (col. 3, lines 52-59). The purpose

behind this is to have a thick skin layer that presumably will be more durable. The Examiner maintains that the combinations of Hays '967, Hays '821, or Bindra '435 with Onderkirk et al. are proper for all of the reasons mentioned above; further, the rejection of claim 8 in each of these instances are also proper.

***Conclusion***

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERARD T. HIGGINS whose telephone number is (571)270-3467. The examiner can normally be reached on M-Th 10am-8pm est. (Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Ruthkosky can be reached on 571-272-1291. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GERARD T. HIGGINS  
Examiner  
Art Unit 1794

/G. T. H./  
Examiner, Art Unit 1794

/JENNIFER MCNEIL/  
Supervisory Patent Examiner, Art Unit 1794